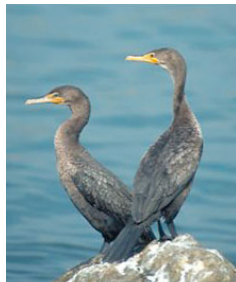

SEABIRD COLONY PROTECTION PROGRAM



ACTION PLAN

September 2006



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INTRODUCTION

Background and Overview

The Seabird Colony Protection Program (SCPP) is one of a series of projects funded by the *Command* Oil Spill Restoration Fund. On September 26, 1998 the *Command* had an accident while anchored in the San Francisco Bay. Around midnight, and only 15 miles off the San Mateo County coast, it began draining the previously damaged tank, which resulted in the release of oil into the ocean. This release was not reported to the appropriate authorities. U.S. military aircraft followed an oily sheen trail to the vessel off the Guatemala coast, where the U.S. Coast Guard intercepted it. Oil samples from the small accident in San Francisco matched the *Command* to the mystery spill, tarballs and oiled birds off the San Mateo County coast.

The successful prosecution of the *Command* vessel operator and owners, and the recovery of natural resource damages, marked the first time a tanker vessel has been held criminally accountable for illegally dumping oil in California. From the civil case settlement, approximately \$4,000,000 was recovered for natural resource damages. An estimated 3,000 gallons of IBF 380 (Fuel Oil No. 6) was spilled and oil sat offshore of the San Mateo coast for approximately four days before any came ashore. An estimated 1,490 Common Murres and other surface-nesting seabirds were killed and injured, and many miles of beaches from Año Nuevo to Pt. Reyes were lightly oiled.

The *Command* Oil Spill Natural Resource Trust was formed as a result of the damages incurred. Trustee agencies responsible for the injured resources developed a restoration plan to determine how best to use the recovered funds to address injuries. The Seabird Colony Protection Program was identified as a preferred restoration project in the restoration plan. Gulf of the Farallones National Marine Sanctuary (Farallones sanctuary) is spearheading the SCPP in cooperation with the U.S. Fish and Wildlife Service (USFWS) Common Murre Restoration Project, and other agencies, sanctuaries and non-governmental organizations.

Nesting seabird populations are significant living resources of the Farallones sanctuary and its surrounding waters. The Farallon National Wildlife Refuge supports one of the largest concentrations of breeding seabirds in the contiguous United States, which are dependent on the nutrient-rich waters off the Central California Coast. The islands, waters and surrounding coastal rocky shores and sandy beaches, such as Castle Rocks, Año Nuevo Island, Devil's Slide Rock, Double Point Rocks, Point Resistance and Point Reyes are major seabird breeding colonies that were possibly affected by the *Command* spill.

To manage human impacts on wildlife effectively, a comprehensive program has been developed and is outlined in the strategies including monitoring, enforcement, and outreach and education. This document marks a framework program plan for the SCPP. The Farallones sanctuary will facilitate the implementation of the SCPP, develop the overall program plan, manage the program and coordinate completion of all priority actions.

Purpose and Need

Breeding and roosting seabird species, particularly those species that nest or roost on cliffs or offshore rocks, are highly susceptible to human disturbances. The potential to harm or disturb breeding seabirds can come from various sources: popular coastal area recreational activities such as kayaking, boating and hiking; planes and helicopters; water-based tourism/recreation such as wildlife watching or diving; and fisheries operations that fish or anchor near breeding colonies.

Currently, no coordinated management and conservation program for seabird colonies and roosting sites exists in California, while overlapping jurisdictions have made it difficult to adequately address human disturbance issues. A few planning efforts are underway that address some aspects of California seabird conservation needs, but no one action plan considers all the biological factors, regulatory issues, conservation threats, management needs and restoration opportunities.

Seabird restoration efforts have been underway at certain sites for many years, but several factors have impeded recovery at some colonies. Mortality in gillnets and oil spills, as well as avian and human disturbance at breeding colonies, have been identified as the main factors impeding recovery of some colonies. Some factors, such as mortality in oil spills, are difficult to control on a local level. Others, such as large-scale mortality in gillnet fisheries, have been addressed in past efforts and nearly eliminated. However, human disturbance continues to occur and can be addressed on a local and regional level to benefit the health of seabird populations and other wildlife (e.g. marine mammals).

To address human disturbance, an organized outreach and education program, coupled with enforcement, management and monitoring is the best way to enhance seabird recovery efforts. Increased public awareness, coupled with coordinated management and strategic partnerships, is necessary to effectively address the source of seabird disturbance. The main focus of the SCPP is to reduce human disturbance at seabird colonies within the region impacted by the *Command* oil spill through addressing the biological factors, regulatory issues, conservation threats, management needs and restoration opportunities. The SCPP will help further the vision of the U.S. Fish & Wildlife Service Pacific Seabird Conservation Plan, and is consistent with several of the recommendations in The California Current Marine Bird Conservation Plan Chapter on Human-Seabird Interactions.

Goals and Objectives

Program Goal

The primary goal of the SCPP is to work in collaboration with federal and state agencies and non-governmental organizations to improve the survival and recruitment of seabird colonies. Focusing on species affected by the spill and most susceptible to human disturbance, the SCPP seeks to reduce human disturbance at breeding and roosting sites from Point Reyes to Point Sur, California.

The SCPP will take a multi-pronged approach to achieving this goal by:

- 1) Determining where and what kind of human disturbance has the greatest effect on seabirds, and assessing the success of the SCPP by using colony surveillance/monitoring data;
- 2) Providing appropriate education and outreach to government agencies and ocean users on the macro level by targeting organized events, association meetings, conferences, air and boat shows and ecotourism vendors; and on the micro level with individuals including researchers, rangers, sea kayakers, coastal recreational users, commercial and recreational fishermen, whale watchers and students;
- 3) Reviewing current statutes, authorities, regulations and agency jurisdictions pertaining to managing and protecting seabirds and seabird colonies, conducting a gap analysis and determining what regulations need better enforcement and what geographic areas are subject to which regulations, and whether or not additional or amended regulations are required; and
- 4) Working with enforcement agencies on the federal, state and local level to encourage active enforcement of laws and regulations that protect seabirds, and to promote a coordinated law enforcement effort.

Program Objectives

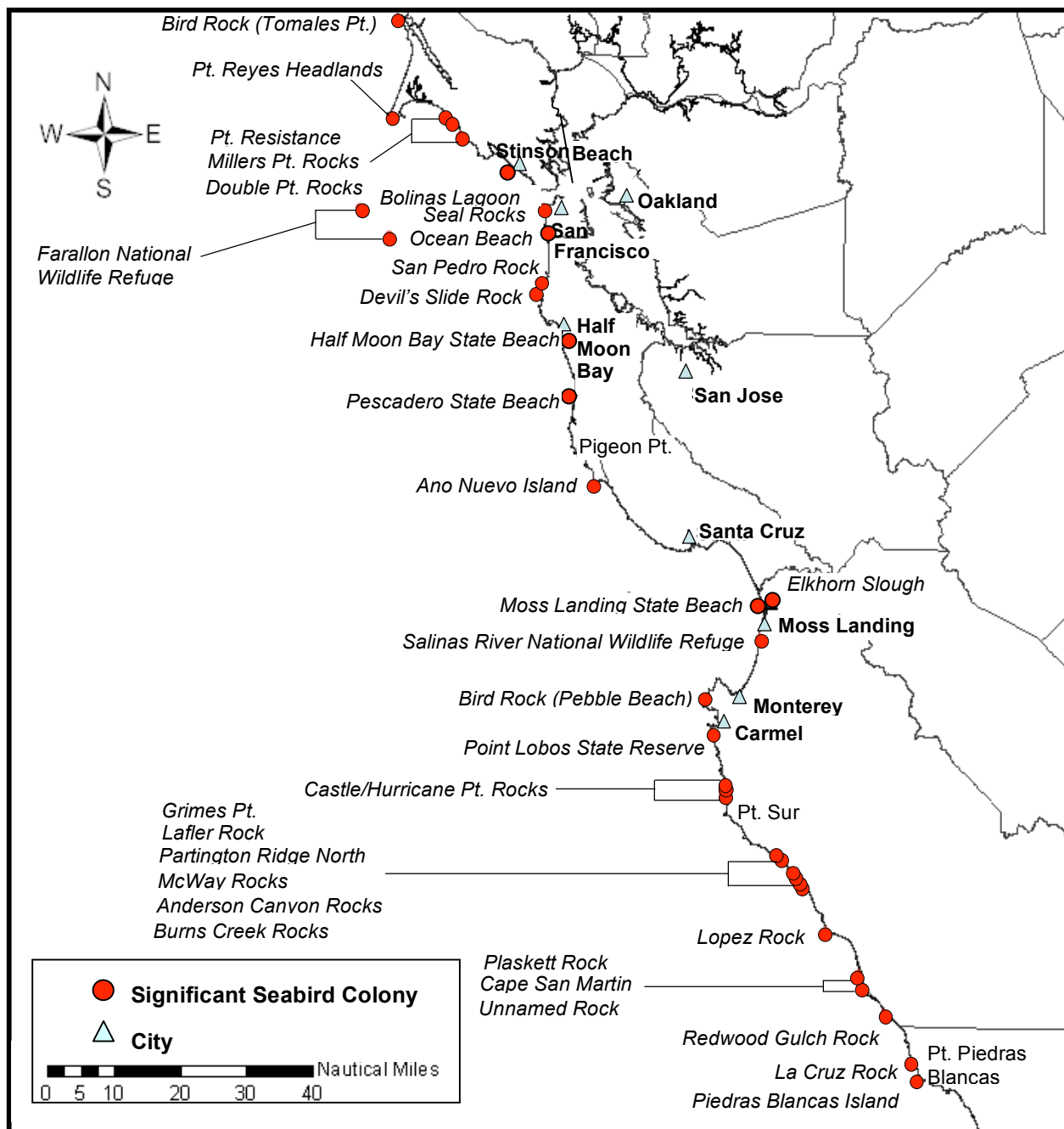
- 1) Documenting types and levels of human disturbance at Central California Coast seabird colonies and any changes occurring over time as the SCPP is implemented;
- 2) Increasing seabird disturbance information exchange at key events/venues;
- 3) Increasing awareness among organized users who impact nest prospecting, pre-breeding, roosting, nesting and breeding seabird colonies;
- 4) Increasing Central California Coast seabird protection coordination among agencies, non-governmental organizations, researchers and stakeholders;
- 5) Increasing the number of agencies, non-governmental organizations and interested public reporting incidents of seabird disturbance; and
- 6) Documenting success levels of the SCPP through colony monitoring/surveillance.

SETTING

Target Species and Key Colonies

The primary target species are seabirds that nest and roost on the surface of cliffs or offshore rocks including: Common Murres, Brandt's Cormorants, Double-crested Cormorants, Pelagic Cormorants and Brown Pelicans. In addition, the SPP will address human disturbance issues for other species, as needed to reduce negative impacts, including other surface-nesting and roosting seabirds such as Western Gulls and Pigeon Guillemots, as well as burrow-nesting seabird species such as Cassin's Auklets, Rhinoceros Auklets, Tufted Puffins, Leach's Storm-Petrels and Ashy Storm-Petrels.

Figure 1: Map of Key Ocean and Coastal Colonies- Marin County through Monterey County



Threats to Seabird Recovery

Seabird species and colonies that were affected by the *Command* spill are still recovering from past declines. In particular, the Central California Common Murre population suffered a decline of about 50% between 1982 and 1989 due primarily to mortality in gillnets and oil spills. During this period, one colony of approximately 3,000 murrelets at Devil's Slide Rock was completely extirpated and others nearly so. Restoration efforts that followed, such as the restoration project at Devil's Slide Rock, have been underway since the mid-1990s. Despite these restoration efforts, human uses of the ocean have interfered with the nesting, feeding and roosting habits of seabirds. Some colonies, such as the Castle/Hurricane Rocks in Monterey County and the Drake's Bay colonies in Marin County, have only partially recovered while others have rebounded to the early 1980s population levels. However, the Central California murre population remains well below historic (pre-20th century) levels. Human disturbance has been identified as a main factor impeding recovery at some colonies along the Central California Coast.

Seabirds are long-lived animals with low reproductive rates. To breed successfully and maintain populations, seabirds have evolved to nest in areas that are inaccessible, such as offshore rocks, islands and steep mainland cliffs dropping to the sea, to most land predators. Since seabirds are part of the ocean ecosystem and susceptible to climate changes, prey availability and oceanic conditions, it is critical that breeding is successful as often as possible. Also, some seabird species are highly site-specific, returning each year to the same nest site or colony. Young birds often return to the colony where they were born. Severe disturbance that causes abandonment of nests or colonies can leave birds without a breeding site and potentially result in several years of lost reproduction.

High levels of disturbance, including frequent interruptions of natural behaviors or a single severe event, can impact a seabird colony in several ways, including: disruption of nest site prospecting, nest site defense, courtship, feeding of young or resting behaviors; nest, egg or chick loss or abandonment; increased predation; increased stress levels; higher energy costs; and even colony abandonment. This can lead to large reductions in the number of breeding attempts and breeding success, causing fewer young to be produced. A reduction in the number of young produced ultimately results in lower recruitment of new breeders needed to maintain or increase populations. Disruption of resting and feeding behaviors can cause physiologic changes that result in a reduction in the health and survival of non-breeding seabirds. Impacts of human disturbance exacerbate reductions in breeding success and/or survival by natural or other anthropogenic (e.g., oil spills, fishery mortality) sources.

Behaviors that indicate disturbance include head bobbing, wing flapping, head and body raises or other alert postures, or displacement and flushing from roosts and nests. If one major flushing is caused during a sensitive period, such as a low-flying aircraft or a boat approaching too close during the breeding season, large-scale or complete nest abandonment and potential loss of the entire colony's reproductive effort for the year can result. Long-term or repeated disturbance can cause colony abandonment. Cumulative small impacts can impart large-scale harm.

Top three types of disturbance to seabird species that nest or roost on cliffs or offshore rocks¹:

- 1) Low-Flying Aircraft: including military and private planes and helicopters, “ultralight” crafts, and commercial or film crew/media. Aircraft disturbance has been the most frequent problem and is increasing in some areas. Helicopters have been shown to cause the most flushing per incident.
- 2) Boats: including kayaks, wildlife viewing boats, commercial and recreational fishing vessels, private motorized vessels and jet skis. The impacts from boats are mostly from vessels approaching in close proximity to the colony. Other impacts can come from vessels fishing nearby and attracting birds from their nests, observed disturbances have come from bright lights used to attract squid to the surface, crab fishing spotlights, lights used while anchored and bait use on fishing vessels. In areas that are regularly monitored, boats have caused the most severe observed impacts.
- 3) Humans on Foot: including coastal hikers, beach walking and recreation, picnickers and people who have unleashed pets in sensitive areas. Disturbance from humans landing on offshore rocks with nesting seabirds or approaching mainland colonies too closely can easily cause very serious consequences. Although this has been a source of disturbance in the past, humans on foot are currently considered a moderate problem for the Central California offshore colonies. They have not been an observed source of disturbance at some colonies, but do remain a threat at certain mainland breeding sites.

Other human disturbances that impact nesting, roosting and feeding seabird colonies:

- 1) Marine debris, including plastics
- 2) Lost and active fishing gear
- 3) Noise
- 4) Lights
- 5) Unleashed pets
- 6) Non-native predators and predators with populations that are assisted by humans

Statutory, Regulatory and Enforcement Framework

Current federal and state authorities, laws and regulations pertinent to seabird “disturbance” are the responsibility of both federal and state agencies. At this time, there is not one Act that addresses all seabird disturbance concerns.

An overview of relevant federal and state seabird-related regulatory bodies, jurisdictions, species covered, prohibited activities and penalties organized by statutory authority can be found in Appendix III: Seabird-related Laws, Regulations and Authorities. Below is a summary list with key points regarding enforcement of each of these federal laws, regulations and authorities.

¹ Information based on annual reports to the *Apex Houston* Trustee Council from the restoration of Common Murre colonies in Central California, and U.S. Fish and Wildlife unpublished monitoring data.

Federal Laws, Regulations and Authorities

1. *National Marine Sanctuaries Act* - The primary objective of the National Marine Sanctuaries Act is ecosystem protection. The sanctuary facilitates other activities that do not interfere with this goal. The scope of enforcement includes the ability for search and seizure and civil penalties. A case of criminal liability can only be made for interference with enforcement. The civil burden of proof is to show a preponderance of evidence. Any monetary fines assessed via sanctuary laws and regulations are to be used to manage and improve the sanctuaries. Currently, the Central California coastal sanctuaries do not have uniform “no take” regulations.
 - i. Monterey Bay National Marine Sanctuary
 - ii. Gulf of the Farallones National Marine Sanctuary
2. *Migratory Bird Treaty Act* – In order for a seabird disturbance to be considered a potential violation, “take” needs to be demonstrated. “Take” is defined as harmed or killed.
3. *Endangered Species Act (ESA)* -The word “take” is defined differently than it is in the Migratory Bird Treaty Act. The word “harass” is included in the definition of “take” in the ESA. If a species is not listed, then the ESA cannot be used.
4. *Airborne Hunting Act* - This Act only applies to aircraft; however, “harass” applies to all wildlife species, not just species listed under the ESA.
5. *Bureau of Land Management (BLM) Authorities* – The scope of wildlife disturbance regulations are limited to operating an off-road or motorized vehicle in a manner causing, or likely to cause disturbance. BLM manages the California Coastal National Monument, which was designated via a Presidential Proclamation to protect over 20,000 offshore rocks and small islands above mean high tide along the California coastline. A Resource Management Plan has been developed, with a goal of developing criteria that identifies the wildlife species and habitat requiring management and protection, but no additional regulations have been implemented.
6. *National Wildlife Refuge (NWR) Regulations* – Jurisdiction includes the Farallon, Don Edwards San Francisco Bay, San Pablo Bay and Salinas River NWRs. Taking or disturbing wildlife is prohibited. Through California boating regulations, there is a seasonal closure between March 15 and August 15 to vessel traffic within 300 feet of shoreline at specified portions of Southeast and North Farallon Islands.
7. *National Park Service Regulations of General Applicability* – There are general prohibited activities that are related to the taking, feeding, touching, teasing, frightening or intentional disturbance of wildlife nesting or breeding. There is also a provision that prohibits allowing a pet to make noise that frightens wildlife. Park-specific regulations for parks within the project area contain no additional restrictions relevant to seabird colony protection.
 - i. Point Reyes National Seashore
 - ii. Golden Gate National Recreational Area

State Laws, Regulations and Authorities²

- | | |
|---------------------------------------|------------------------------------|
| 1. California Endangered Species Act | 3. California Game Refuge Statutes |
| 2. California State Parks Regulations | 4. California Boating Regulations |

Enforcement Challenges and Opportunities

Enforcement of these disparate statutes and regulations poses a serious challenge to the continued protection of seabird colonies and roosting sites. Seabird disturbances can come from land, air and sea, which make it difficult for enforcement officers to patrol. Also, patrol officers are not necessarily authorized or cross-deputized to enforce laws and regulations from other agencies.

In many instances disturbances are witnessed by individuals monitoring the seabird colonies, researchers out on the water, ocean users and the public, but it is not clear to them how to document a disturbance or where to send the report. In many cases these incidents could be a violation under one of the existing authorities, laws and regulations, but the witness is usually not informed on how to spot, document or report a violation. A contributing factor to the inability of individuals to report a witnessed seabird disturbance violation is that there is not a comprehensive program established throughout the California Central Coast that educates the public on proper incident reporting. The SCPP Action Plan makes several recommendations under the “Recommended Strategies” section to address these challenges.

In 2005, the National Oceanic and Atmospheric Administration (NOAA), the National Marine Fisheries Service/NOAA Fisheries, the National Park Service, and the U.S. Fish and Wildlife Service signed a Memorandum of Understanding (MOU) that promotes these agencies to work together on enforcement at a federal level. Other enforcement-related MOUs exist between these agencies and the state of California as well. However, the infrastructure has not been completely implemented or integrated for the Central California Coast and a review of all relevant MOUs is needed. The SCPP Action Plan can provide a mechanism for better coordination and cooperation at a regional level, which is the key to successfully enforcing all laws and regulations pertaining to human interactions with seabirds.

Despite the lack of coordinated enforcement, individuals monitoring the seabird colonies, researchers out on the water, ocean users and the public can still assist with documenting and reporting seabird disturbance incidents. Proper documentation of an incident is the key to successful prosecution. There is a need to develop standardized reporting mechanisms through all agencies, and to better educate the public on how to spot a violation. Below are general tips to documenting an incident, which can be built upon during implementation of the SCPP Action Plan:

- Never approach or attempt to interview/investigate anyone you suspect of violating a seabird disturbance law. Call the NOAA Enforcement Hotline at: 1-800-853-1964.
- If you feel you have observed a “taking” violation, try to provide evidence of the take with photographs.
- For aircraft violations, identify the aircraft number and type, and provide photos if possible.
- For watercraft violations, identify type of vessel, ID number and name, and provide photos if possible.
- For personal watercraft (e.g. jet skis) violations, contact an Enforcement Officer or USCG.
- For possessing violations, contact an Enforcement Officer or USCG.

² See Appendix III: Seabird-related Laws, Regulations and Authorities for an overview of relevant state seabird-related jurisdictions, species covered, prohibited activities and penalties.

RECOMMENDED STRATEGIES

Overview

The following pages illustrate the strategies that can be used by SCPP program managers to achieve the goal of reducing human disturbance to seabird colonies. The strategies are prioritized in the Action Plan according to the results of the first annual Technical Advisory Committee meeting held in June 2006. It will be the job of the Seabird Protection Advisory Committee and Working Groups to develop a timeline according to feasibility, available expertise and costs.

Desired Results:

- 1) Elimination or reduction of human disturbances to seabird colonies
- 2) Increased awareness of potential impacts of adverse human-seabird interactions;
- 3) Increased awareness of safe methods of observing seabirds while engaged in recreational activities;
- 4) Increased ocean user awareness of seabird habitats; and
- 5) Increased awareness of decision makers (such as federal, state and local agencies and management bodies) of the threat human disturbance poses on breeding seabird colonies and methods to reduce and eliminate human disturbance.

How We Got Here:

On November 3, 2005, SCPP staff held a workshop for seabird research, management, enforcement and education specialists. Information was presented on current monitoring efforts, the scope of current laws and regulations and human disturbance reduction outreach success stories. Participants were from agencies and organizations that study, manage and protect ocean wildlife. Workshop participants reviewed Central California seabird colony disturbance monitoring data; discussed ways to coordinate seabird colony enforcement, management and education efforts; brainstormed ways to address human disturbance to seabird colonies; and developed a list of long-term strategies for reducing human disturbance along the Central California Coast.

Workshop Goal

In order to reduce human disturbance to seabird colonies along the Central California Coast, the workshop aimed to identify and outline: 1) ways to increase public awareness about the sensitive nature of seabird colonies and roosts, and their location along the Central California Coast; 2) greatest impacts from human disturbance to seabirds; and 3) ways for agencies and organizations to work collaboratively to decrease or eliminate human impacts on nesting and roosting seabirds by encouraging responsible human behavior.

Program Strategies

Technical Advisory Committee

The recommended strategy for receiving advice on the implementation of the SCPP is to have a SCPP Technical Advisory Committee from federal, state and local agencies, representing all program areas that includes expertise from scientists, natural resource managers, enforcement officers and agents and ocean educators. The Technical Advisory Committee (TAC) will provide an opportunity for those who study and manage ocean wildlife to interact with each other and set priorities for the program, taking into account budget, staffing and feasibility of all strategies.

The entire TAC will meet, at minimum, on an annual basis, and members may be asked to join specific working groups. The main tasks of the TAC are to: 1) prioritize management, enforcement and outreach and education recommendations for the SCPP; and 2) set a timeline for recommended actions. The TAC will also review work products produced by the SCPP. At least one member from the following agencies are represented on the TAC:

- Bureau of Land Management
- California Boating and Waterways
- California Coastal Commission
- California Department of Fish and Game
- California State Parks
- California State Lands Commission
- Golden Gate National Recreational Area
- National Marine Sanctuary Program
- NOAA/NMFS Restoration Center
- NOAA Office of Law Enforcement
- Point Reyes National Seashore
- San Francisco Bay National Wildlife Refuge Complex
- US Fish and Wildlife Service
- US Coast Guard

Working Groups

In order to effectively facilitate a coordinated management approach, working groups will be formed during the course of this project as needed. The working groups will include some members of the TAC, stakeholders and representatives from the Gulf of the Farallones National Marine Sanctuary Advisory Council. The working groups will implement specific strategies as prioritized by the TAC. All working group products and outcomes will be reviewed by the Gulf of the Farallones National Marine Sanctuary Advisory Council to allow for additional public participation.

Currently, the recommended strategies include two working groups: Outreach and Education (O-WG), and Enforcement and Coordinated Management (E-WG). The working group membership will include representation from resource management agencies, a cross section of affected stakeholders and non-governmental organizations.

Program Action Items

Monitoring and Restoration (M-Strategies)

The agency lead on the monitoring and restoration component of the SCPP is the USFWS Common Murre Restoration Project. The SCPP will rely on the data gathered by USFWS and its collaborators, including Humboldt State University, as well as other partner organizations such as PRBO Conservation Science, Point Reyes National Seashore, Farallon National Wildlife

Refuge and the Farallones sanctuary. This data will identify management strategies and outreach efforts needed, such as target user groups or individuals. Monitoring and surveillance of seabird colonies will be conducted to identify frequencies and types of disturbances that occur and their resulting impacts.

Specifically, the SCPP will rely on continuous on the ground monitoring and surveillance of three key colonies for disturbance in collaboration with *Apex Houston* Common Murre recolonization funds: Point Reyes (Marin Co.), Devil's Slide Rock and mainland (San Mateo Co.), and the Castle/Hurricane Colony Complex (Monterey Co.), where several years of baseline data on populations, reproductive success and disturbance levels of seabirds (with a focus on Common Murres) already exists. Other colonies or roosts may be monitored depending on need and efficacy.

These colonies have been the focus of restoration and monitoring efforts since the mid-1990s. The Castle/Hurricane colony has experienced a history of aircraft and boat disturbance that has hampered colony growth. At Devil's Slide Rock, a dramatic increase in aircraft and boat disturbance in recent years threatens the success of an ongoing Common Murre recolonization project. Apparent recent increases in low flying aircraft around the Point Reyes National Seashore have raised concerns of increasing threats to the area's important seabird colonies.

Monitoring work will be focused on the breeding season when impacts to seabirds can be greatest. Data collection will be focused on monitoring locations and numbers of birds utilizing the colonies, reproductive success of Common Murres, Brandt's Cormorants, and possibly other species, and both human and natural disturbance. Telepresence is currently being used at Devil's Slide Rock to monitor seabird reactions to human disturbance events. The SCPP will also determine the need for telepresence at other sites. All of these data parameters will be used to assess the levels and overall impacts of disturbance. Disturbances will be documented in a standardized fashion that will permit appropriate assessment and follow-up.

Monitoring will also be used to assess changes in human disturbance levels as they relate to the efficacy of the management and outreach efforts. In addition, SCPP program staff will participate in the California Seabird Coordination Meeting the Pacific Seabird Group Annual Meeting and the Watchable Wildlife Conference, and will use information presented at these meetings and conferences to adjust management, enforcement and outreach and education strategies.

General Strategies (MG):

Target: Policy decision makers, scientists, enforcement officers and agents and natural resource managers

MG1: Use available data, compiled information and a gap analysis to determine where the most sensitive colonies and roosts exist, identify areas with frequent or long-term disturbance and prioritize the colonies and roosts that need disturbance minimization strategies.

MG2: One time update of seabird colony distribution and abundance data for the Central California Coast. Conduct colony surveys from boat, land, and air to estimate populations, identify sensitive colonies, and update existing GIS database. Outside funding will be sought in order to implement this strategy.

MG3: Determine the success or failure of efforts to reduce human disturbances by assessing annual seabird disturbance levels, breeding success, and population sizes in the California Current, and reviewing available data on impacts of mortality events, causes of death, prey availability, climate and ocean conditions, coupled with human impacts. Track oceanographic conditions such as El Niño and upwelling strengths. Use Farallon Island data, Beach Watch, COASST, Beach Combers, and other publications to document and assess mortality event patterns.

This information is critical for assessing region-wide population changes as well as problems that may exist at individual colonies. Understanding region-wide seabird population trends is important for understanding differences between natural and anthropogenic factors and for assessing broad-scale effects of restoration efforts.

MG4: Conduct aerial photographic surveys in collaboration with the *Apex Houston* Common Murre recolonization funds. These surveys will be used to: 1) continue assessments of population trends of Common Murres, Brandt's Cormorants and Double-crested Cormorants in the study area; 2) identify potential disturbance problems at colonies not covered in ground monitoring and; 3) assist in determining the success of the SSCP to increase seabird populations.

MG5: Collate and publish data collected from monitoring Central California Coast seabird colonies. Use available information to help clearly establish the problem of human disturbances.

Enforcement and Coordinated Management (E-Strategies)

Many recommended strategies in this Action Plan require expertise on laws, regulations and authorities related to seabird disturbance. The Agency lead on the enforcement and management component of the SSCP is the Farallones sanctuary. However, a coordinated effort from all agencies that implement and enforce regulations is key to the success of these strategies. The Enforcement and Coordinated Management Working Group (E-WG) will be formed and staffed by the Farallones sanctuary. Staff from the following agencies will be asked to join the E-WG:

- Bureau of Land Management
- California Department of Fish and Game
- California State Parks
- NOAA Agencies and General Counsel
- NOAA Office of Law Enforcement
- National Park Service
- US Fish and Wildlife Service
- US Coast Guard

In addition to agency and organization representation on the E-WG, at least two affected stakeholder representatives, one non-governmental organization representative and a member of the Farallones Sanctuary Advisory Council will be invited to join.

General Strategies (EG):

Target: Natural resource managers, researchers, policy branch chiefs and regulatory branch staff

- EG1: Perform a gap analysis of current policies, statutes and regulations; include a review of the consistency of language from each agency (e.g. different “take” definitions), and a review of the agencies’ jurisdiction.
- EG2: Use human disturbance events reports provided by partner organizations and agencies to assist with outreach, management and enforcement efforts.
- EG3: Develop an enforcement plan which includes: identifying and prioritizing worst abusers; a policy to enforce across jurisdictions including identifying the need for MOUs; a plan to monitor effectiveness of management strategies by working with law enforcement; and a plan for cross-deputizing of enforcement officers and/or cross-use of resources. Determine the feasibility of developing a centralized contact for reporting all incidents.
- EG4: Develop a standard incident reporting document/form, distribute incident reporting procedures and provide a list of enforcement contacts to field biologists, regulatory agencies and other law enforcement offices. Train field biologists, managers and volunteers (through programs such as Beach Watch and Beach Combers) on the regulations related to seabird disturbance and the ways they can collect evidence so it can be used for enforcement.
- EG5: Produce seabird viewing guidelines that can be used region-wide, including approach distance recommendations for people and their crafts and vessels, and information on identifying a disturbance.
- EG6: Form and maintain agency and public partnerships to connect the land to surrounding water, sharing equipment resources such as boats, and involving user groups and NGOs in implementing management strategies.
- EG7: Develop and maintain enforcement partnerships, including working with Fish and Game wardens and federal patrol officers to conduct seabird patrols, distributing violation reports across agencies, honoring agreements and MOUs among agencies and holding workshops to educate agencies conducting enforcement activities on seabird disturbance laws and regulations.
- EG8: Recommend working in a more coordinated way for managing and enforcing laws and regulations by advising a new regulatory approach and uniform policies.

Low Flying Aircraft (EA):

Target: Federal Aviation Administration, Coast Guard and other military pilots

- EA1: Coordinate with other federal, state, and local agencies to provide training for U.S. Coast Guard pilots on a biannual basis on regulated and recommended distances for aircraft. Set up annual meetings with the local Coast Guard operations officers, California Highway Patrol and local county sheriff pilots and appropriate military personnel. Distribute coordinates and maps of sanctuary overflight restrictions.

- EA2: Form a coalition of agencies to approach the Federal Aviation Administration about revising aeronautical charts to contain current information on altitude restrictions over sensitive colony sites. Encourage the demarcation of USFWS “recommended” distance of 2000 feet AGL and overflight zones. Have sensitive colonies marked on charts.

Vessels - Motorized and Non-motorized, and Humans on Foot (EV):

Target: Federal and state policy and decision-makers

- EV1: Review data on seabird colony disturbance from vessels and humans on foot and determine which colonies need buffer zones to prevent human disturbance. Look at human uses in these zones, examine nest prospecting, foraging and roosting areas, pre-breeding and breeding season on the colony, determine type and distance of buffer needed and make a recommendation on type of zoning at key colonies.
- EV2: Designate seabird protection zones around key colonies, set up appropriate regulations and policies, create a public process to establish zones and determine the best way to demarcate zones by using buoys in the water and flags and signage on land.
- EV3: Work with the National Ocean Service to display sensitive seabird colonies on nautical charts.

Outreach and Education (O-Strategies)

The majority of recommended strategies in this Action Plan are focused on outreach and education opportunities, and the recommended work products require expertise from ocean educators. Therefore, the Outreach and Education Working Group (O-WG) will be established within the first year of the program. The Farallones sanctuary will be the lead agency for the O-WG and will be responsible for organizing and facilitating all meetings. In addition, the Farallones sanctuary will conduct general public education on seabird disturbance issues. The outreach and education strategies will target identified audiences for each type of disturbance, as outlined below. Developing partnerships with the target audience is key to successful implementation of the plan. Individuals from the following agencies and organizations will be invited to join the O-WG:

- | | |
|---------------------------------------|--|
| - Bureau of Land Management | - Oikonos Ecosystem Knowledge |
| - Department of Boating and Waterways | - PRBO Conservation Science |
| - Marin Open Space | - San Francisco National Wildlife Refuge Complex |
| - National Marine Sanctuary Program | - US Fish and Wildlife Service |
| - National Park Service | |

In addition to agency and organization representation on the O-WG, at least two affected stakeholder representatives and a member of the Farallones Sanctuary Advisory Council will be invited to join.

Outreach and Education Vision

The general outreach and education component of the SCPP will focus on outreach to target audiences, and will create programs, resources and materials with easy to understand messages. Ocean communicators including educators, outreach and public relations specialists and media, ocean users, pilots, beachgoers, general public and students will be targeted. The SCPP will develop brochures, posters, presentations, signs, videos, literature, exhibits and displays to educate all ocean users about the presence of nesting and roosting seabirds, and ways to avoid disturbing them.

The SCPP will seek to develop programs and resources, including the use of telepresence, to educate students about seabird colonies in California. It will build upon current curriculums to develop a high school unit and elementary unit (3rd to 5th grade) on seabird biology, research and conservation, and develop teacher resources and curriculum library for seabird stewardship educational programs. These materials will be made available electronically.

Easy-to-understand messages will also be developed that can be used to educate the public on human disturbances to seabirds. Messages will be tailored to different audiences and awareness levels and can include: explanations of what is normal bird behavior, examples of signs of disturbance, guidelines for responsible human interactions with seabirds, why seabirds are important and alternative opportunities to view seabirds without causing a disturbance. The following are some examples developed at the November 3, 2005 SCPP Workshop and by Farallones sanctuary staff. Staff will work to develop key messages in collaboration with the O-WG.

- Don't disturb what you came to see
- For the Birds or "birds do more than fly"- this is their home and they need space to rest and nest
- Your disturbance now may have impacts for years to come (e.g. eggs will break and chicks will be killed, and a colony can lose an entire generation)
- Only you can prevent colony loss
- These rocks are a special resting/nesting space
- Make this rock a "no flush" zone
- Please be quiet-birds resting

Media will be used to educate the public and ocean users on human disturbances to seabirds. The following should be explored as potential media outlets:

Magazines/News

- | | | |
|------------------|-----------------------|------------------------|
| - Kayaker | - National Geographic | - Local paper feature |
| - Coastal Living | - Explorer | articles |
| - Sunset | - AAA | - Ranger Rick |
| - Audubon | - Outside | - Fish Sniffer |
| | | - Western Outdoor News |

Video

- PSAs
- Distributing "Returning Home"

The SCPP will also explore the possibility of using information from surveys and/or focus groups to assess knowledge of target audiences on seabird colony disturbance issues and prioritize outreach materials for each type of disturbance. The program would then use this information to aid in determining appropriate messages and venues.

Low Flying Aircraft (OA)

Target: Small plane and helicopter pilots, including private, commercial and media pilots, Coast Guard and other military pilots and California Highway Patrol

- OA1: Develop and distribute outreach materials and/or letters on an annual basis or before large aircraft-related events, that inform aircraft pilots about the location and breeding season of Central California seabird colonies, and the impacts to these colonies from low flying aircraft. In addition to targeting individual pilots, outreach efforts should include ultralight, hang glider and wind surfing clubs, media helicopters, film crews, air tour companies and private plane associations.
- OA2: At air shows and events with aircraft, such as the Big Sur Marathon, AMGEN Bike Race, Pacific Coast Dream Machines, Mavericks Surf Contest and San Francisco Fleet Week, educate organizers and work to provide information on seabird disturbance in registration packets. Develop and staff an exhibit at air shows, and include literature that targets pilots.
- OA3: Work with airports to post information about seabird colonies. Use the “flight room,” the airport center where flight plans are filed, to post messages on seabird disturbance and include GIS coordinates in electronic form for pilot use. Assess the feasibility of using the no-assist airman (NOTAM) and electronic devices on board to educate pilots on overflight information.

Motorized Vessels (OV)

Target: Commercial and recreational fishing, tourists, recreational boaters and personal watercraft users, tour operators and ocean transportation providers.

- OV1: Develop messages about ways to reduce seabird disturbance from a motorized vessel. Promote ways to have responsible interactions, include appropriate approach distances from colonies, and address all types of vessel-related conflicts including lights, noise, attraction, hooking and entanglement. Give supporting reasons, and couple with easily read materials that clearly state the consequences of disturbance.
- OV2: Develop boater friendly methods and materials to distribute information on vessel disturbances to seabirds. Post information to online fishing club message boards, in local fishing newspapers and at harbors, and exhibit at fish and tackle shows, harbor events and boat shows.
- OV3: Educate sport fishing and ecotourism charter crews on seabird viewing guidelines and protection/disturbance laws for responsible human interactions with seabirds.
- OV4: Determine the feasibility of including information on seabird protection zones in recreational fishing regulations.

Non-motorized Vessels (OVN)

Target: Personal watercraft users and providers (kayaks, canoes, vessels under 20ft)

- OVN1: Develop and distribute posters, flyers and maps to individuals, marinas, recreational equipment rental facilities and recreational sport user clubs. Develop a PowerPoint presentation for use at stores and club meetings.

- OVN2: Design and designate signs or kiosks for coastal landing ramps to educate small vessel operators about the sensitivity of nearby seabird colonies.
- OVN3: Design and distribute seabird disturbance information to marine supply and sporting goods stores. Work with kayak manufactures and sporting goods stores to give information about seabird disturbance e.g. pamphlet, DVD or CD with kayak purchase/rental.
- OVN4: Link wildlife disturbance reduction information to marinas, recreational equipment stores and recreational sport user clubs' web sites.

Humans on Foot (OH)

Target: Interpretation specialists, naturalists, coastal hikers, tourists, coastal bird watchers and beach users

- OH1: Determine the need for observation decks, designated lookouts, docents at strategic locations and/or an on-the-water interpretive program near key colonies. Provide appropriate seabird viewing opportunities at selected coastal vantage points. Develop a plan for signage at key locations (near selected offshore rocks and coastal trails near seabird nesting areas).
- OH2: Develop and implement programs and materials to promote public awareness. Target public lighthouses, aquariums, museums and nature centers.
- OH3: Develop and conduct presentations about seabird disturbance to community groups.

PERFORMANCE MEASURES³

Performance objectives have been developed in order to ensure that the SCPP is working toward achieving its goals. Success of the SCPP will be measured by monitoring for human disturbance at key colonies and by measuring the increase in outreach efforts and reported incidents over a four-year period. The overall measure of performance is the decrease of human disturbances at seabird roosting and colony sites, and ultimately, the increase in the number of successful breeding seabirds off the Central California Coast.

Monitoring Performance Measures

| Objective | Measurement | Timeframe | Target |
|---|---|--|--|
| Documenting types and levels of human disturbance at Central California seabird colonies; | Measure a reduction in human disturbance and evaluate contributing factors to success or failure. | Year 1 Year 2 Year 3 Year 4 | Baseline 20% ↓ 40% ↓ 60% ↓ |
| Documenting success levels of the SCPP through colony monitoring/surveillance. | Measure numbers, productivity and change in distribution. | Year 1 Year 2 Year 3 Year 4 colony | Baseline - - 10% in Common Murre counts. |

Enforcement and Coordinated Management

| Objective | Measurement | Timeframe | Target |
|---|--------------------------------------|--------------------------------------|-------------------------------------|
| Increase the number of agencies, non-governmental organizations and interested public reporting incidents of seabird disturbance. | Measure number of recorded incidents | Year 1 Year 2 Year 3 Year 4 | Baseline 10% ↑ 20% ↑ 40% ↑ |

Outreach and Education Performance Measures

| Objective | Measurement | Timeframe | Target |
|--|---|--------------------------------------|--------------------------------------|
| Increase seabird disturbance information exchange at key events/venues. | Measure number of public venues attended, signs posted and number of individuals receiving information. | Year 1 Year 2 Year 3 Year 4 | Baseline 20% ↑ 40% ↑ 50% ↑ |
| Increase awareness of organized users who impact nesting and breeding seabird colonies, including fishing association events, air shows, boat shows and dive venues. | Measure number of organizations contacted. | Year 1 Year 2 Year 3 Year 4 | Baseline 10% ↑ 20% ↑ 40% ↑ |
| Increase Central California Coast seabird protection coordination among agencies, non-governmental organizations and interested public. | Measure number of requests for information and number of places information is posted. | Year 1 Year 2 Year 3 Year 4 | Baseline 10% ↑ 40% ↑ 100% ↑ |

³ The SCPP Action Plan will be reviewed and updated on an Annual Basis.

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